

**Appln No. 10/724,162**  
**Amdt date 04/26/2008**  
**Reply to Office action of 2/19/2008**

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) In a cellular radio system that transmits data from an IP-based network, through a base station controller (BSC) and any Base Station Transceiver (BTS) controlled by the BSC, to a plurality of active subscriber units, which are in radio communication with the BTS and in a data connection state, data transmission from the BTS to any active subscriber unit at any time being at one of a plurality of given transmission rates and at a defined power level, relative to a maximum total power transmittable by the corresponding BTS;

a method for estimating ~~the~~ a specific power of transmission from the BTS to each of the active subscriber units at any given time, the method comprising:

defining in time a succession of observation windows;

observing the data flowing into the BSC and addressed to each of the active subscribers and, for each subscriber, measuring an amount of such data flowing during each of a plurality of said observation windows, obtaining measured amounts;

calculating using said measured amounts an estimated specific power for each of the subscribers, ~~where the total power transmitted by the BTS during each of a plurality of said observation windows is equal to the sum of products of the average rate multiplier by the estimated specific power for each of the subscribers.~~

2. (original) The method of claim 1, wherein the duration of each observation window is an integral multiple of allocation time slots.

3. (original) The method of claim 1, wherein said plurality of windows is N windows, where N is equal to the number of active subscriber units.

4. (original) The method of claim 3, wherein said calculating includes solving N simultaneous equations.

5. (original) The method of claim 4, wherein the N equations are linear equations having N unknowns and NxN coefficients, the unknowns being proportional to specific power values of respective subscriber units and the coefficients being proportional to corresponding results from said measuring.

6. (cancelled)

7. (cancelled)

8. (previously presented) The method of claim 1, further serving to schedule the transmission of data from the BTS to the active subscribers and further comprising:

using said estimated specific power of all the subscriber units to schedule data transmission to the subscribers

9. (previously presented) The method of claim 1, further serving to control data flow into the BSC and further comprising:

using the results of said estimation to control the flow into the BSC of data addressed to the active subscriber units.

10. (currently amended) An apparatus connectable to a data ingress port of a base station controller (BSC) of a cellular radio system that transmits data from an IP-based network, through

the BSC and any Base Station Transceiver (BTS) controlled by the BSC, to a plurality of active subscriber units, which are in radio communication with the BTS and in a data connection state, data transmission from the BTS to any active subscriber unit at any time being at one of a plurality of given transmission rates and at a defined power level, relative to a maximum total power transmittable by the corresponding BTS;

said apparatus serving to control the transmission of data from the BTS to the active subscriber units and comprising a ~~power estimator, including a processor configured—~~

to define in time a succession of observation windows;

to observe the data flowing into the BSC and addressed to each of the subscribers and, for each subscriber, to measure an amount of such data flowing during each of a plurality of said observation windows;

to compute an average rate multiplier for each active subscriber;

and to calculate, using any results of said measuring, an estimated specific power for each of the subscriber units, ~~where the total power transmitted by the BTS during each of a plurality of said observation windows is equal to the sum of products of the average rate multiplier by the estimated specific power for each of the subscribers.~~

11. (original) The apparatus of claim 10, further comprising a scheduler, responsive to said estimated specific power values and operative to schedule data transmission from the BTS to the active subscriber units.

12. (original) The apparatus of claim 10, wherein the scheduler is further operative to calculate from said estimated specific power values predicted power values.

13. (original) The apparatus of claim 10, further comprising a data flow controller, responsive to

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said scheduling and operative to control the flow into the BSC of data addressed to the active subscriber units.

14. (currently amended) A cellular radio system, including at least one base station controller (BSC) and at least one Base Station Transceiver (BTS), controlled by any of the BSCs, and operative to transmit data from an IP-based network, through any BSC and any BTS controlled by it, to a plurality of active subscriber units, which are in radio communication with the BTS and in a data connection state, data transmission from the BTS to any active subscriber unit at any time being at one of a plurality of given transmission rates and at a defined power level, relative to a maximum total power transmittable by the corresponding BTS;

the system comprises ~~a power estimator~~ a processor, having access to data flowing into the BSC and ~~includes a processor~~ is configured—

to define in time a succession of observation windows;

to observe the data flowing into the BSC and addressed to each of the subscribers and, for each subscriber, to measure an amount of such data flowing during each of a plurality of said observation windows;

to compute an average rate multiplier for each active subscriber;

and to calculate, using the results of said measuring, an estimated specific power for each of the subscribers, ~~where the total power transmitted by the BTS during each of a plurality of said observation windows is equal to the sum of products of the average rate multiplier by the estimated specific power for each of the subscribers.~~

15. (new) The method of claim 1, where total power transmitted by the BTS during each of a plurality of said observation windows is equal to sum of products of the average rate multiplier by the estimated specific power for each of the subscribers.

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16. (new) The method of claim 10, where total power transmitted by the BTS during each of a plurality of said observation windows is equal to sum of products of the average rate multiplier by the estimated specific power for each of the subscribers.

17. (new) The method of claim 14, where total power transmitted by the BTS during each of a plurality of said observation windows is equal to sum of products of the average rate multiplier by the estimated specific power for each of the subscribers.

### **REMARKS/ARGUMENTS**

In the Office action mailed February 19, 2008, claims 1-5 and 8-14 were rejected under the first paragraph of 35 U.S.C. 112 as failing to comply with the enablement requirement. The Office action also rejected claims 1-5 and 8-14 under the second paragraph of 35 U.S.C. 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner is thanked for the courtesy shown for the telephonic interview of 2/13/08. Specific/custom power from a base station to different subscribers was discussed. The Examiner asserted that the power transmitted from a CDMA base station is the same for all subscribers. Applicant's representative indicated that this assertion was not necessarily agreed to, and asked for an Office action to allow for further opportunity to respond to the assertion.

As an initial matter, the Applicant would like to turn the Examiner's attention to Page 1178 of "CDMA Systems Engineering Handbook," by Jhong Sam Lee and Leonard E. Miller, (1998), attached hereto as Exhibit A.

The control of transmitter power on the forward link of the IS-95 CDMA cellular system has been shown to be of great importance for the achievement of high user capacity. The common air